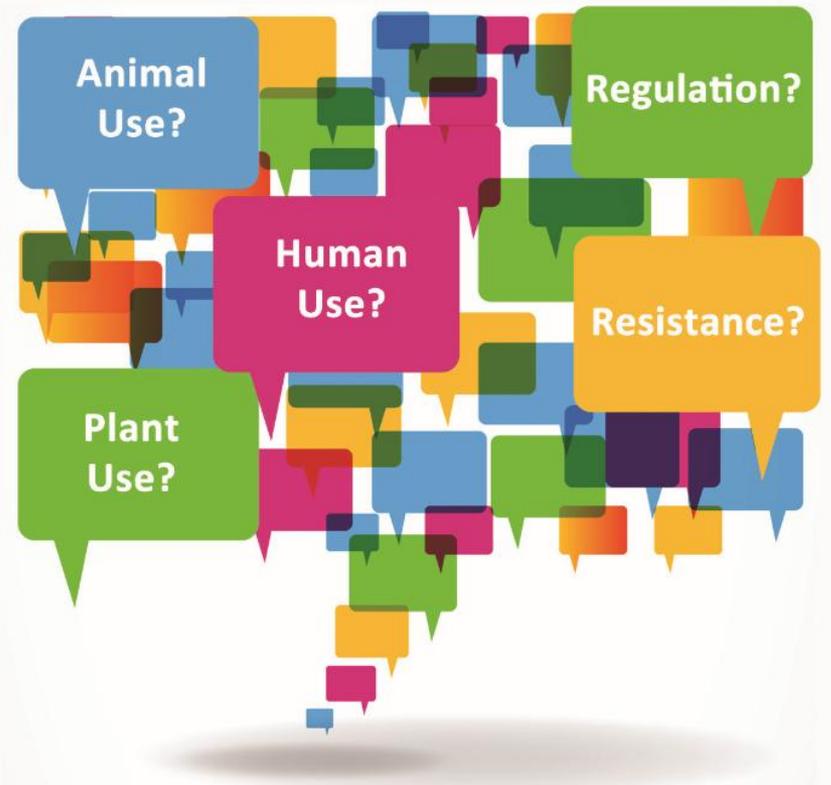


A One Health Approach to Antimicrobial Use & Resistance: *A Dialogue for a Common Purpose*

Improving Health Through
Judicious Use of Antimicrobials
and Decreasing the Impacts
of Antimicrobial Resistance



Leah C. Dorman, DVM

Director of Food Programs

Ohio Farm Bureau

NIAA Board of Directors

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*A Dialogue for
a Common Purpose*



Disclosures/Transparency

- I do not have relevant financial relationship with commercial interests

BUT,....

- I am a farm wife/mom
- I am a veterinarian
- I work for a farm member organization that lobbies
- I care about this issue, but am **NOT** an antibiotic resistance expert

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A Dialogue for
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Why are you here?

NIAA Mission...

- *The mission of the National Institute for Animal Agriculture is to provide a forum for building consensus and advancing solutions for animal agriculture and to provide continuing education and communication linkages to animal agriculture professionals.*

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Use & Resistance:
A Dialogue for
a Common Purpose



Some History



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a Common Purpose*



2011 Antibiotic Symposium

Antibiotic Use in Food Animals: A Dialogue for a Common Purpose

A dialogue among leaders from animal agriculture,
human health, and the media
to discuss science and future strategies



October 26-27, 2011
InterContinental Chicago O'Hare
Rosemont, Illinois

Find Out More ▶

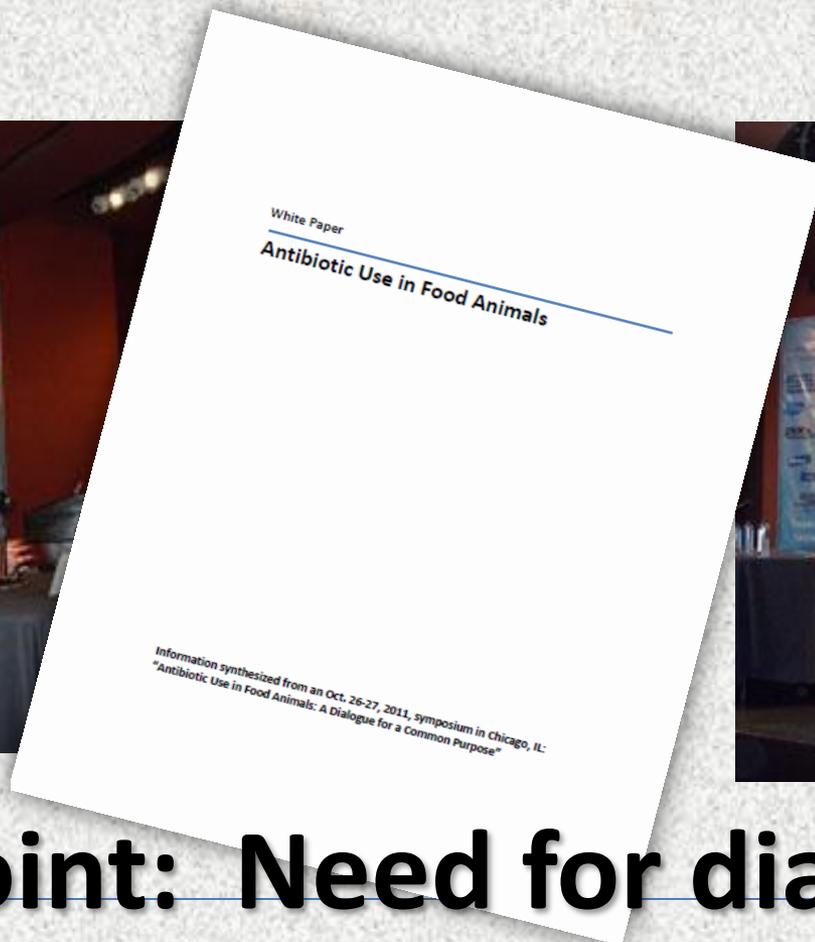
Call 719.538.8843 or visit
www.AnimalAgriculture.org



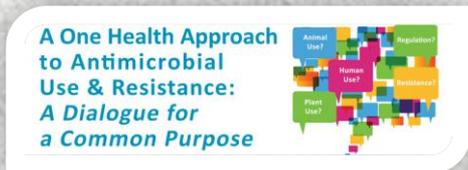
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to Antimicrobial
Use & Resistance:
*A Dialogue for
a Common Purpose*

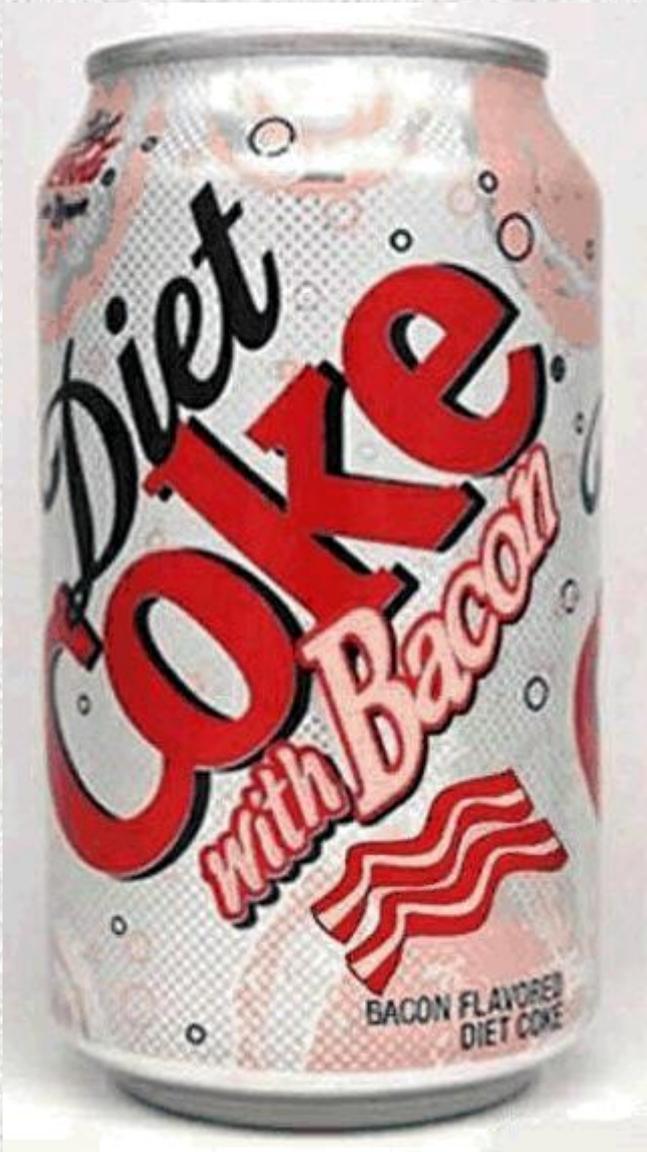


Antibiotic Use in Food Animals: *A Dialogue for a Common Purpose*



**Key point: Need for dialogue
going forward.**





OLD IDEA, NEW FLAVOR

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Nov. 13-15, 2012

Hilton Polaris Hotel
Columbus, Ohio

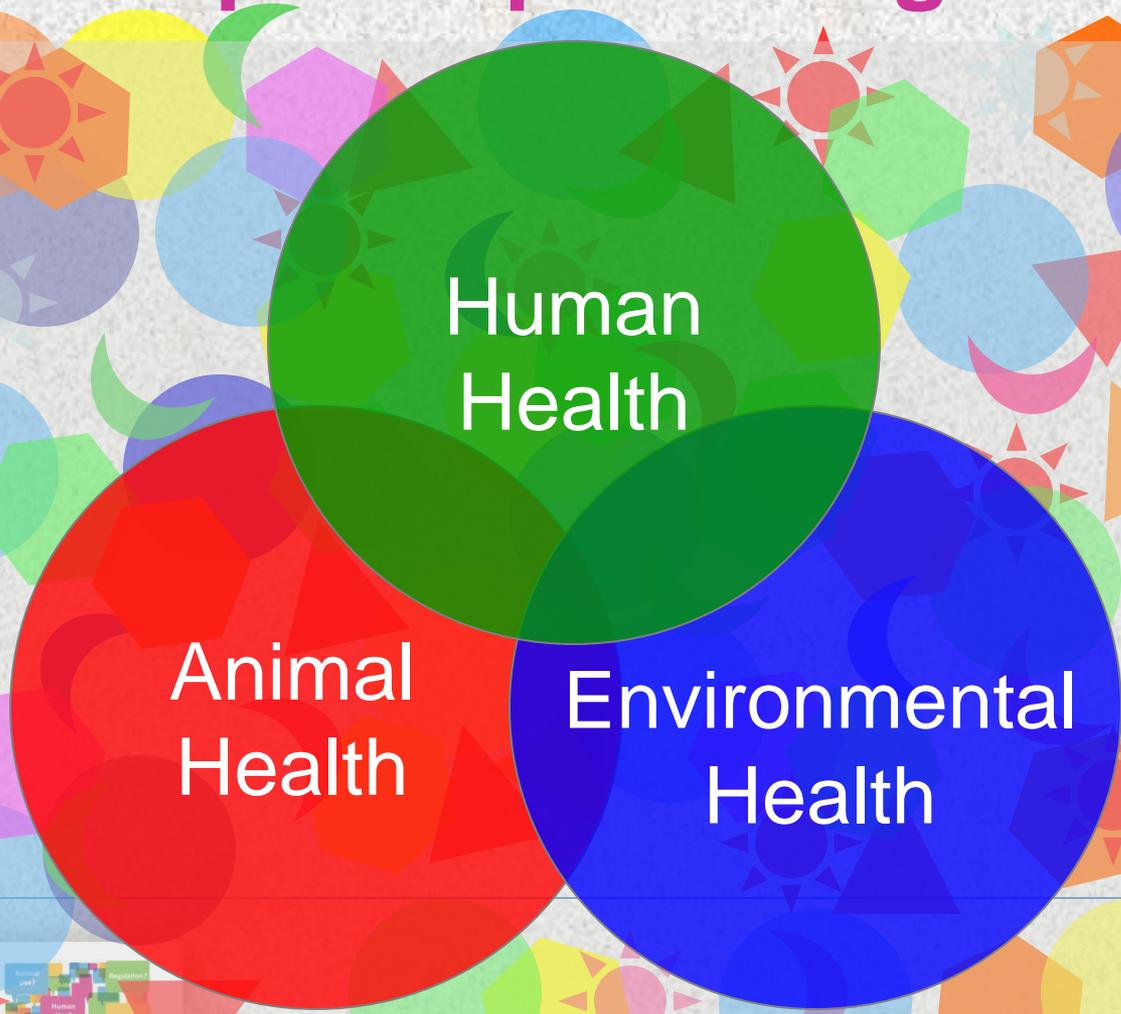
Find Out More ▶

www.AnimalAgriculture.org
or call 719.538.8843, ext. 14

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The Convergence: A New Public Health Kaleidoscope Emphasizing One Health



Human Health

Animal Health

Environmental Health

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One Health - Partnership



PARTNERSHIP

"You give me half the fish, and I'll tell my mom to let you live."

ELEPHANT STEW

1 elephant (medium size)
Brown gravy, and lots of it

Salt and pepper
2 rabbits (optional)

Cut elephant into bite size pieces. This will take about 2 months. Add enough brown gravy to cover. Cook over kerosene fire for about 4 weeks at 465°. This will serve 3800 people. If more are expected, 2 rabbits may be added. But do this only if necessary, as some people do not like to find a hare in their stew.

Note: Adapted from the Favorite Recipes in the Farmer's Almanac, 1972.

Anonymous

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A Dialogue for
a Common Purpose



We can work together,



**Even though we are
different!**

23.01.2004

The scale and complexity of animal and human medical problems embedded in a changing environment, demand that scientists move beyond the confines of their own disciplines and explore new organizational models for team science.



Getting over it!

- **Goals of the symposium:**
 - Lead and engage participants in an open conversation
 - Build relationships with other sectors and gain better understanding of other perspectives
 - Begin to find common ground and formulate a path forward
 - Focus on continuous improvement & commitment to long term health



Finding Common Ground

- It is never personal
- Suspend reactions, emotions and distrust
- Aim for mutual satisfaction not victory
- It is never about your position but your interests
- There are facts and perceived facts – we often prefer to believe what we prefer to be true
- Be clear on the implications of not agreeing

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a Common Purpose



Changing the Game

- **The greatest power is to “change the game”**
 - turning adversaries into partners
 - shift from intractable issue to new perspectives and options



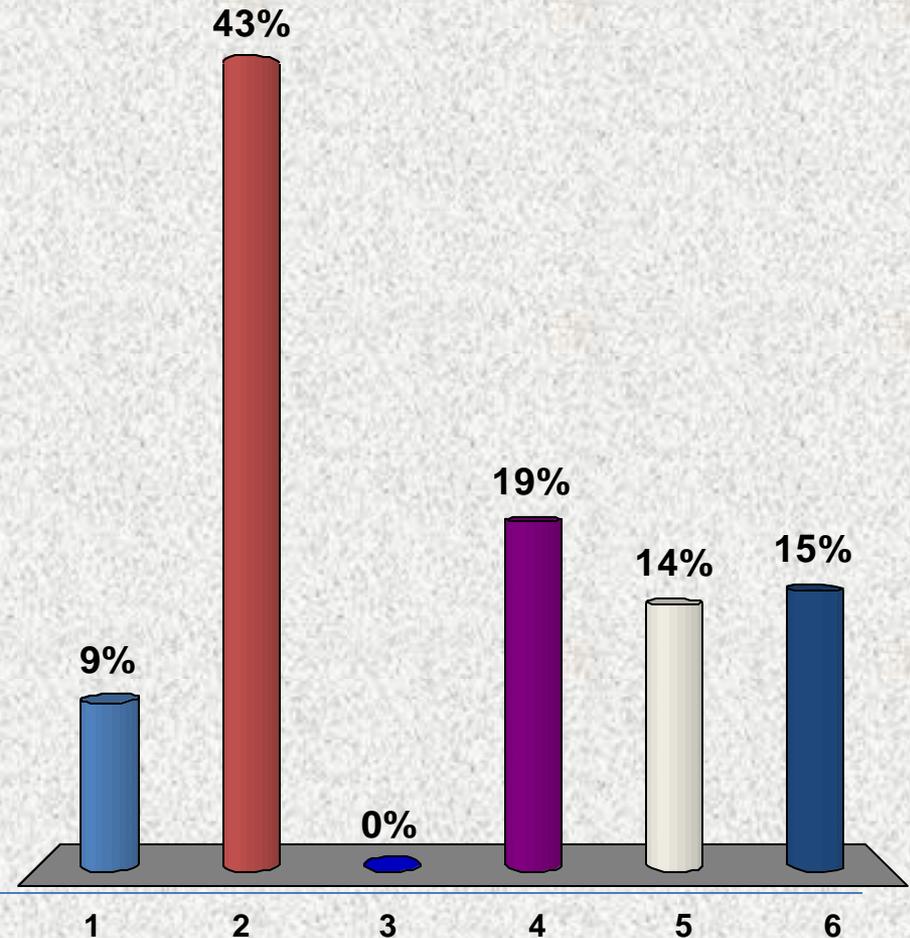
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Who was there?

(Primary focus)

1. Public health
2. Animal health
3. Environmental health
4. Production agriculture
5. Pharmaceutical
6. Other



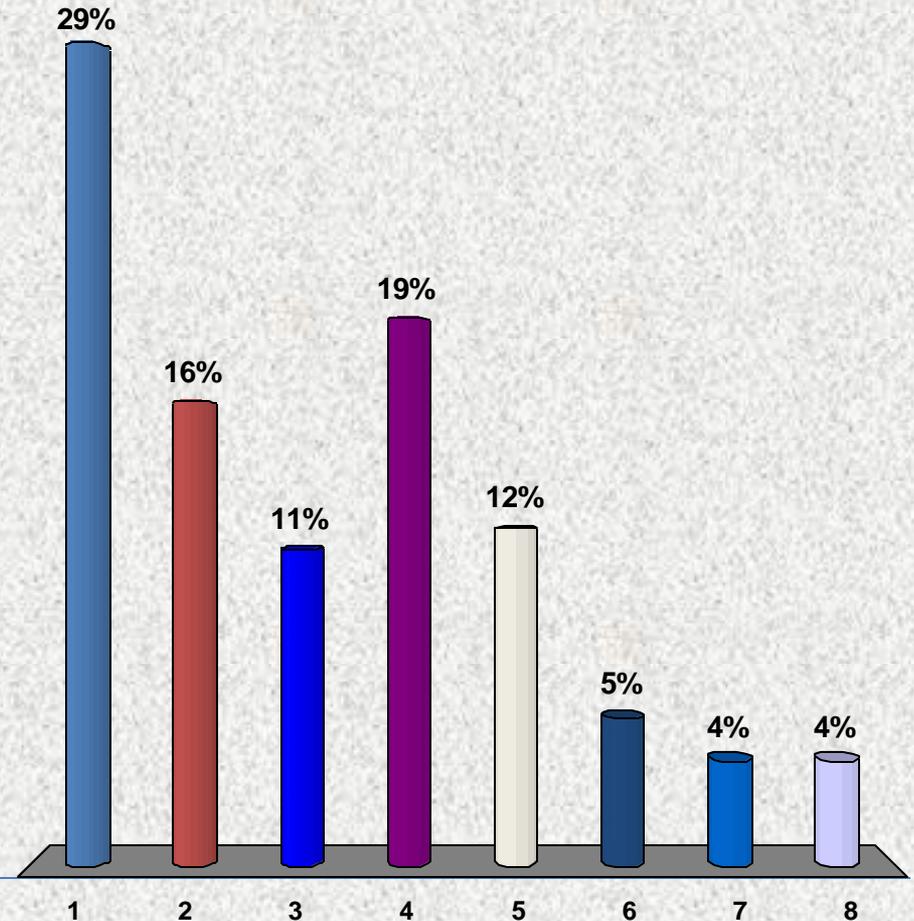
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a Common Purpose*



Who was there?

(Primary Organizational Context)

1. Academia
2. Government
3. Food animal production industry
4. Support industries (e.g. pharmaceutical, herbicides, etc.)
5. Commodity organization
6. Media
7. Private practice
8. Other

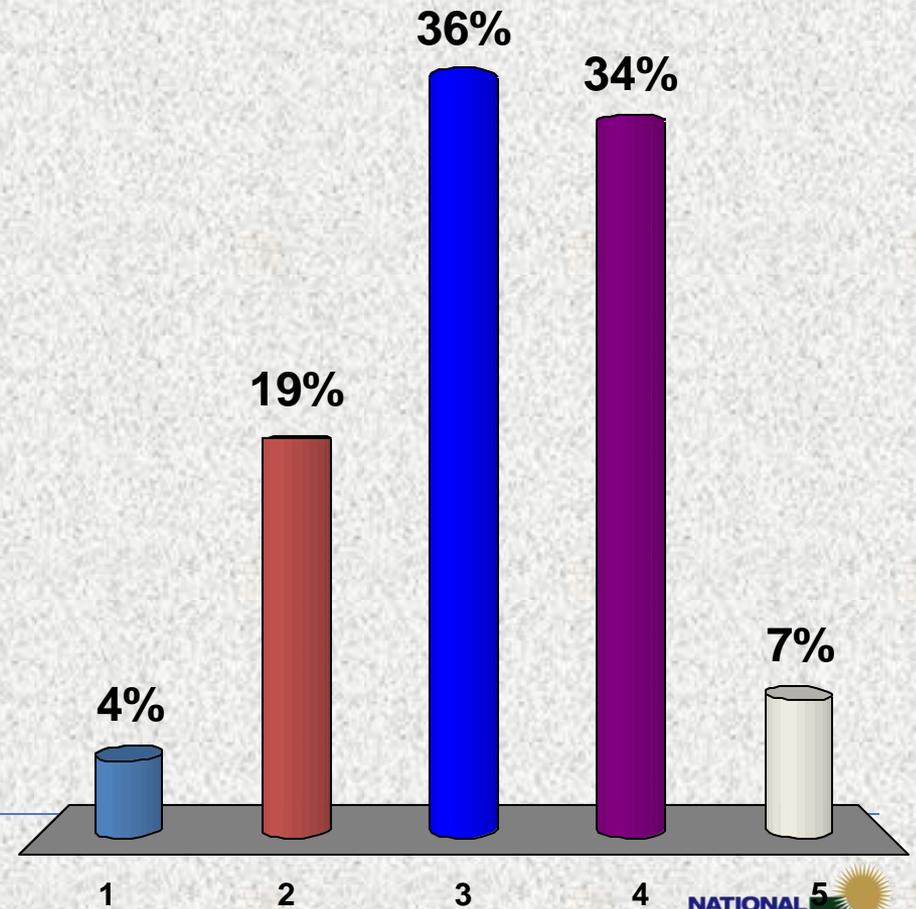


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A Dialogue for
a Common Purpose



The use of antibiotics in food animals leads to increased antimicrobial resistance in humans.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree



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a Common Purpose*





Why?

Who wasn't there?

Joint Statement on Antibiotic Resistance from 25 National Health Organizations and the Centers for Disease Control and Prevention

Understanding this situation, we jointly commit to the following principles to both conserve and replenish our antibiotic resources:

To work with regulatory, veterinary and industry partners to promote the judicious use of antibiotics in food animals

To reinforce the judicious use of antibiotics in agriculture by: limiting the use of medically important human antibiotics in food animals; supporting the use of such antibiotics in animals only for those uses that are considered necessary for assuring animal health; and having veterinary oversight for such antibiotics used in animals

public health threats and that global collective action is required to effectively address the challenge of managing our scarce supply of effective antibiotics

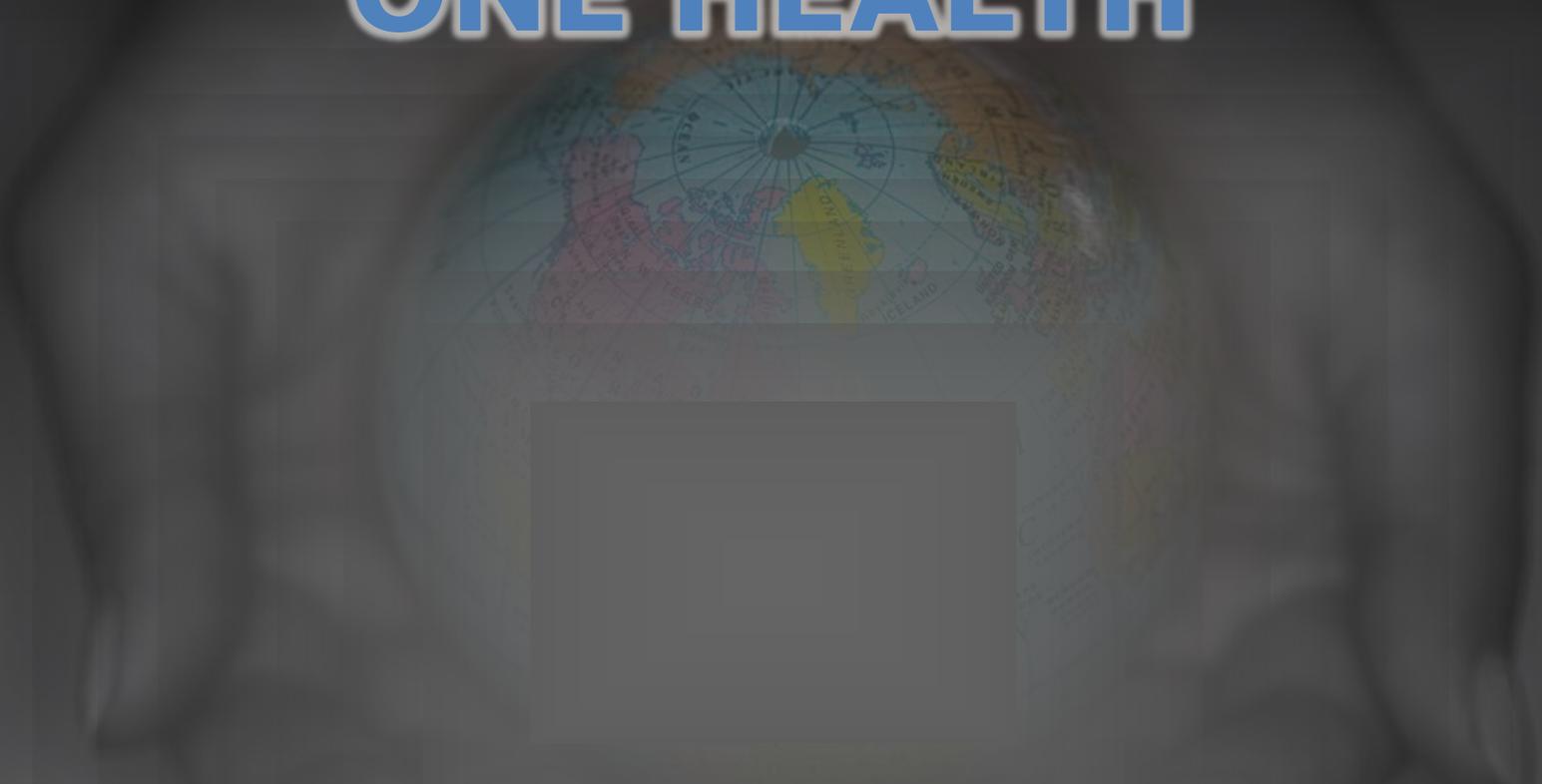
Unacceptable!



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ONE HEALTH



One Health is the collaborative effort of multiple disciplines – working locally, nationally and globally - to attain optimal health of humans, animals and our environment

Nuts & Bolts

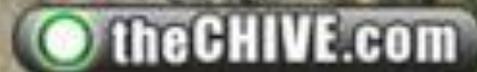
A Dialogue for a Common Purpose

- Facilitated table group discussions/enter ideas into computers
 - Theme team distill overarching themes and “gems”
 - Report back on themes at end of discussion period
 - Keypad polling to set priorities
- 
- A large conference room with people seated at round tables, participating in a meeting. A large screen is visible in the background.



Identify Issues

POSTED AT



Session One

- **Part One: What are the 3-4 most important issues that need to be addressed?**
- **Part Two: What is your vision for what we hope to achieve in addressing these issues?**
 - Change we hope to see if we are successful at addressing/resolving our issues
 - Ultimate impact (e.g., on industry, health, planet)



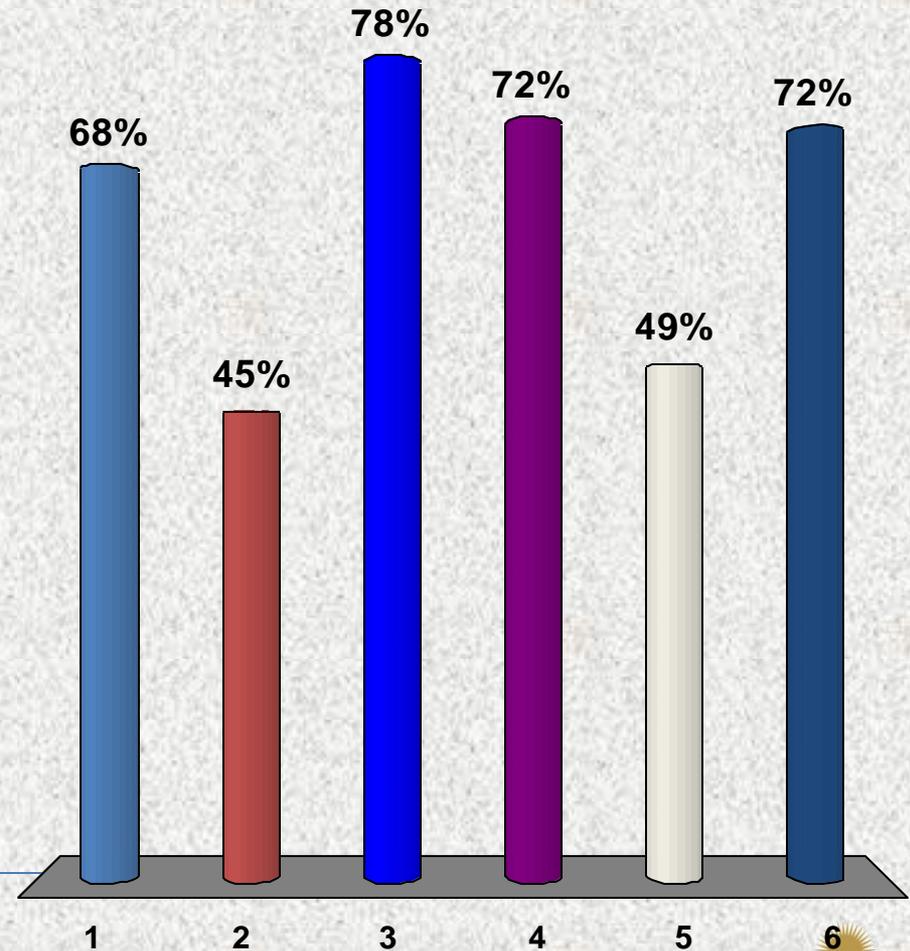
Most Important Issues

1. **Effective communication**
2. **Research into new interventions**
3. **Research to define the antimicrobial use and resistance problem**
4. **Bring together stakeholders to reach consensus on problem**
5. **Organized approach between federal agencies, private sector, institutes for legislation**
6. **Education for producers, animal/human medical professionals on judicious use of antimicrobials**



Top 4 issues

1. Effective communication (#4)
2. Research into new interventions
3. Research to define the antimicrobial use and resistance problem (#1)
4. Bring together stakeholders to reach consensus on problem (#2 – tied)
5. Organized approach between federal agencies, private sector, institutes for legislation
6. Education for producers, animal/human medical professionals on judicious use of antimicrobials (#2 – tied)



Vision to Improve Health

1. Consensus and collaboration (36%)
2. Science driven decision process (26%)
3. Improved communication and education (25%)
4. Redirect how we approach medicine (13%)

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*A Dialogue for
a Common Purpose*



Session Two & Three

- For each of the highest priority issues, what are the 3-4 most important factors that need to be considered in addressing the issue and moving toward the vision?
- For each of the highest priority issues, what are the 3-4 major actions that need to be taken to address the issue?
 - Can be by people/groups represented in this group or those we need to influence
 - Be as specific as possible
 - Criteria for actions: impact on issue, realistic, cost-effective



Priority Issues

1. **Effective communication**
 - Between consumers and producers
 - Between animal and human health professionals
 - Messages delivered through mass media.
2. **Research into defining the problem of antimicrobial use and antimicrobial resistance**
3. **Bring together diverse stakeholders to reach consensus on addressing the problem**
4. **Education for producers, animal and human medical professionals on judicious use of antimicrobials**

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*A Dialogue for
a Common Purpose*



Factors: Effective Communication

- **Quality of communication**

- Unbiased messages (no spin)
- Transparency of communication
- Consistency of message
- Common definitions and standards
- Appropriate language based on audience
 - Health professionals, consumers
- Addressing conceptions and misconceptions of consumers

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A Dialogue for
a Common Purpose



Factors: Effective Communication

- **Collaborative approach to communication**
 - “This message was approved by...”
 - A panel of acknowledged experts from balanced backgrounds
 - Depoliticization of topic
- **Consider what would be the common interests/outcomes that would benefit all or most parties**



Factors: Effective Communication

- **Appropriate modes of communication tailored for specific messages**
 - Mass media
 - Social media
 - Blogs
 - Newsletters
 - Be creative
 - Emotional appeals may even have a place



Action: Effective Communication

- **Commodity and producer groups need to directly engage other stakeholders (i.e. human public health) to define specific problems before engaging lawmakers and the public.**
 - Building relationships under the “One Health” umbrella
- **Communications from commodity and producer groups need to provide the media with results from research that supports their viewpoints regarding antimicrobial use.**



Action: Effective Communication

- **Conduct market research to understand consumer perceptions on issues surrounding AMR and food animal position.**
- **More fully engage with federal agencies on the "Get Smart: Know When Antibiotics Work" campaign.**

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A Dialogue for
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Factors: Research on the problem

- **Research that will yield practical, implementable results “meaningful research”**
 - Identify the sources of the emergence of resistant organisms
 - May include research on impacts of prevention
- **Sources of funding (might they have an inherent bias?)**
 - Who will make research into AMR a scientific priority for funding “on the forefront of science”



Factors: Research on the problem

- **Who is doing the research?**
 - Academia, industry, gov't?
 - Cross disciplinary approach key, given the Animal, Human, Environment triad
- **Who is setting the priorities for research?**
 - How are research priorities really being set?



Factors: Research on the problem

- Do we have adequate surveillance to best identify priorities for emerging infectious disease and research?
- Availability of appropriate diagnostic tools

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*A Dialogue for
a Common Purpose*



Actions: Research

- **International bodies (OIE, WHO) should clearly define research gaps so that science can move forward productively.**
- **Enhance open communication about research needs between the producers and regulatory bodies**
- **Support research that investigates the effects of regulations after they are imposed.**

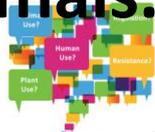


Actions: Research

- **Increase patent protection to promote investment in the area of drug and anti-infective development.**
- **Promote research that is unbiased-develop a One Health advisory board**
- **Harmonize clinical breakpoints for resistance (EUCAST and CLSI are occasionally different for some antibiotics)**
- **Promote research that targets the relationship between antimicrobial use and AGP and the health**

of animals.

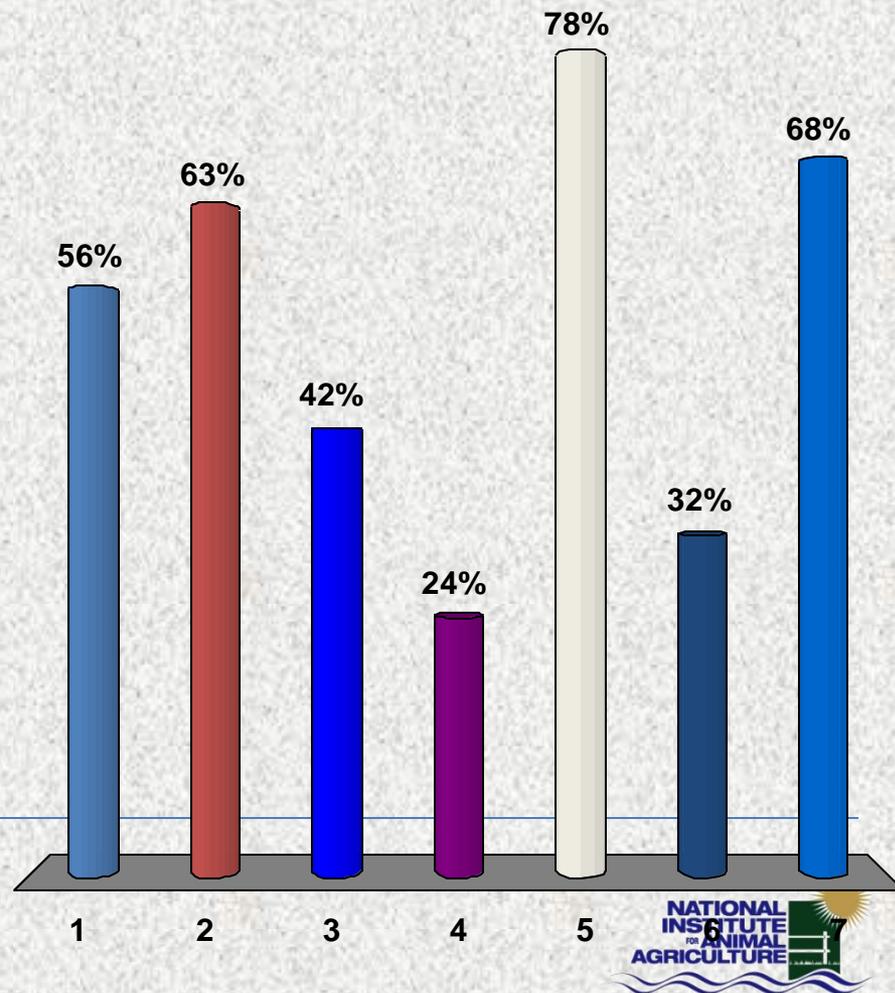
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Research on the problem-Actions

(choose four)

1. International bodies should define research gaps (#4)
2. Open communication about research needs between producers and regulatory bodies (#3)
3. Support research that effects regulations
4. Increase patent protection to promote investment
5. Promote research that is unbiased – develop and advisory board (#1)
6. Harmonize clinical breakpoints for resistance
7. Promote research that targets relationship between antimicrobial use, AGP, health of animals (#2)



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Factors: Stakeholder consensus

1. **Want a broad base/comprehensive group for information**

- need to define and identify the stakeholders
- opposing views/minorities
- recruit different groups and be open to views
- impediments to getting all stakeholders there

2. **Need an open dialogue**

- avoid bias, don't blame, create safe haven
- remain focused and less polarized
- overcome mistrust - who has most to gain or lose?
- show benefits for collaboration for all

3. **Need for consensus at higher levels**

- even if disagreement at lower levels
- avoid government action before there is a consensus

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A Dialogue for
a Common Purpose



Factors: Stakeholder consensus

4. There is not a single group to lead or initiate

- may be competition
- who pays for this?
- should be unbiased to maintain trust

5. Is there low-hanging fruit to start with?

- some groups will work together more naturally than others
- some groups want to divide
- may have to act before everyone is at the table

6. Need to have a clear goal

- Need to define the problem first
- Need a directional vision and time line

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Use & Resistance:
A Dialogue for
a Common Purpose



Actions: Stakeholder consensus

- **Speak to legislators about these issues**
 - Identify key people in government (senators, congressmen) so policy is not formed on incorrect information -Young policy makers
- **Identify key stakeholders & recruitment plan**
 - animal health, human health - doctors, pharmacists, environmental health, policy makers, consumers (representative not just vocal minorities), plant science, producer/commodity groups (including plant and animal), international groups/ other countries



Actions: Stakeholder consensus

- Make sure stakeholders are accountable for reaching goals
- Come up with concrete/ measurable goals - not just a vision
- Identify neutral group (unbiased 3rd party) to lead discussions



Actions: Stakeholder consensus

- **Earn trust of producers, consumers, leaders, and stakeholders**
 - starting in small groups, communicate in a way that interests the different groups, use extension agents, show off science-based achievements, bring stakeholders "on location"
- **Establish working relationships**
 - create monthly/quarterly meetings, create a summit on AMR, use videolinks and webinars

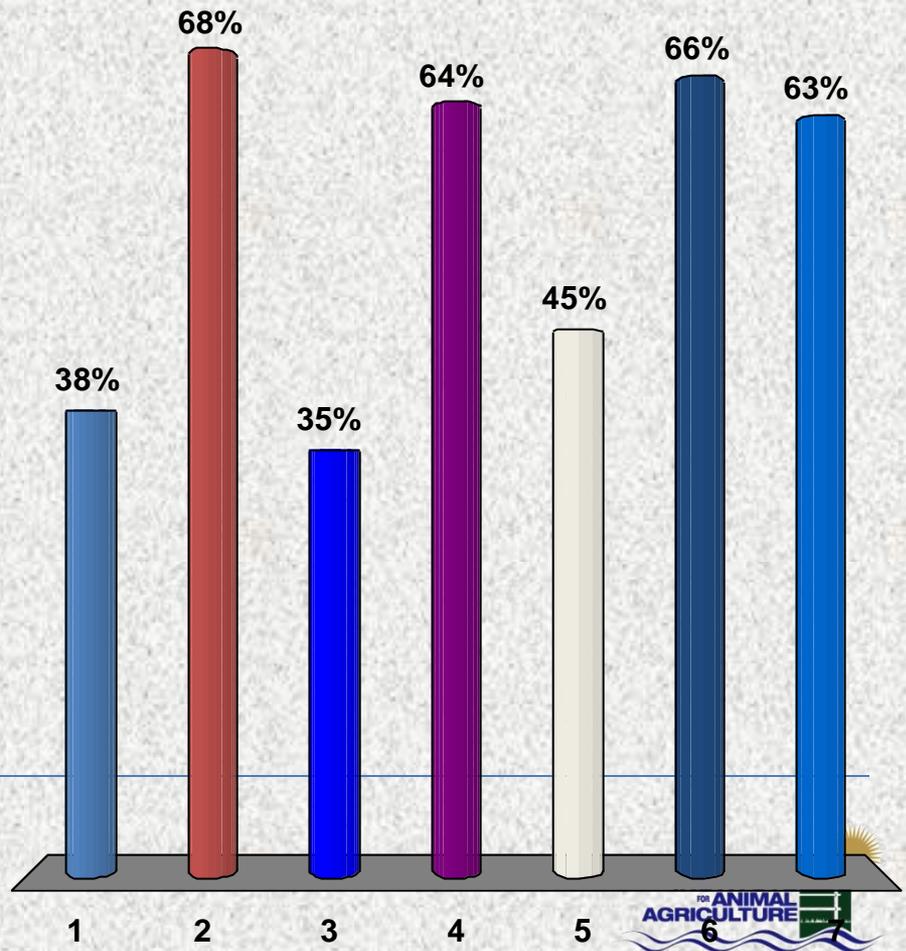
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Use & Resistance:
A Dialogue for
a Common Purpose



Stakeholder Consensus

(choose four)

1. Speak to legislatures about key issues
2. Identify stakeholders & develop recruitment plan (#1)
3. Make sure stakeholders are accountable for goals
4. Concrete/measurable goals (#3)
5. Identify neutral group to lead discussions
6. Earn trust of producers, consumers, leaders and stakeholders (#2)
7. Establish working relationships (#4)



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Use & Resistance:
A Dialogue for
a Common Purpose



Factors: Education on judicious use

1. Defining the groups to educate and their educational needs
2. Defining the most effective educational methods
3. Improving consumer education and increase public awareness on judicious use – disconnected consumer



Factors: Education on judicious use

4. Additional education and improved delivery of educational programs for health professionals about existing judicious use guidelines
5. Educational methods for on-farm training of employees/producers/suppliers about judicious use of antimicrobials
6. Need a clear message to educate people
7. Motivating professionals/producers/consumers through education on consequences of misuse and using a global mindset, improving commitment to improve human, animal, and environmental health

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A Dialogue for
a Common Purpose



Actions: Education

- **Compile and increase availability of existing species-specific judicious use guidelines**
- **Garner consensus from veterinary, environment, OIE, and medical communities to better define judicious use guidelines**
- **Increase availability or require continuing education on judicious use for human and veterinary medical professionals, through symposiums, webinars, etc.**



Actions: Education

- Aim educational programs at leaders, including legislators and the leadership of stakeholder groups.
- Identify motivations of different groups and the optimal terminologies for education of different groups.
- Establish education activities aimed at media groups and building trust with media groups.



Actions: Education

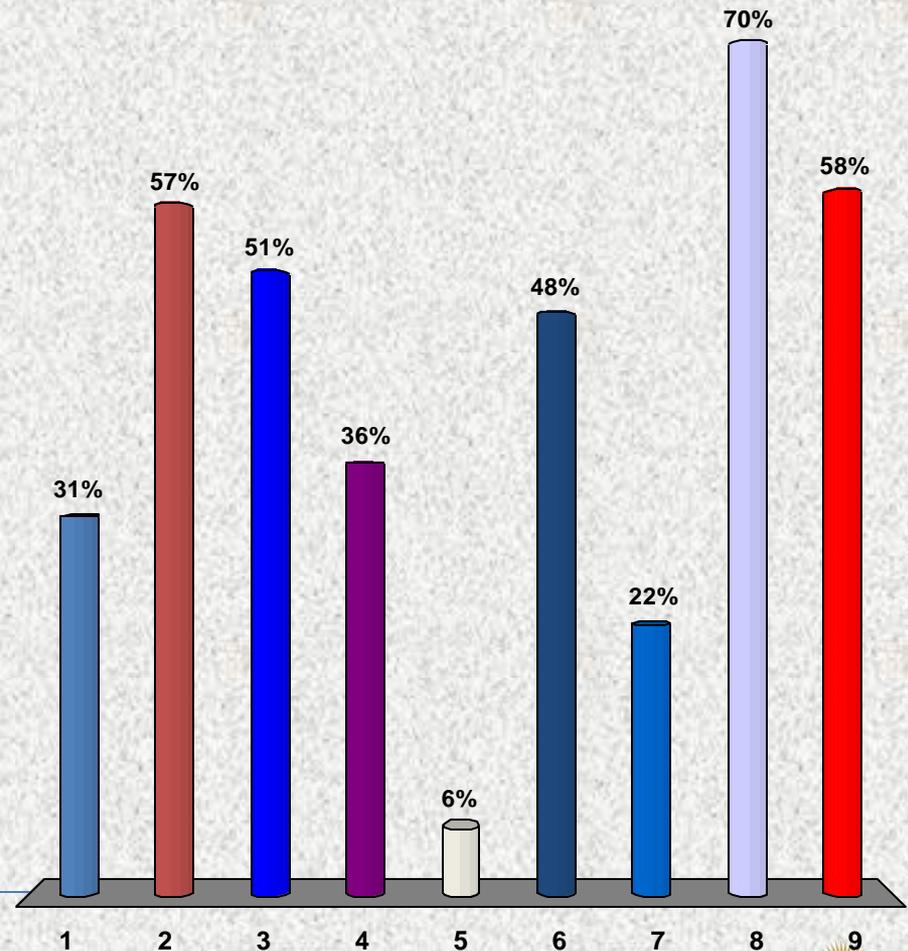
- Create judicious use guidelines for animal producers, and ensure availability in the first language of farm employees.
- Establish collaborative relationship between human and veterinary professionals early on in career (professional schools) through meetings, discussion, shared coursework on judicious antimicrobial use.
- Establish a recurring, self-sustaining conference that includes human and animal professionals on the organizing committee, and includes all relevant stakeholders.

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to Antimicrobial
Use & Resistance:
*A Dialogue for
a Common Purpose*



Education on Judicious use (choose four)

1. Compile and increase availability of existing species
2. Garner consensus from veterinary, environment, OIE, and medical communities (#3)
3. Increase/require CE on judicious use for human and veterinary professionals (#4)
4. Educational programs aimed at leaders
5. Identify motivations of different groups and terminologies for education
6. Establish education aimed at media groups and build trust
7. Create judicious use guidelines
8. Establish relationship between human and veterinary professionals early in careers (#1)
9. Establish recurring conference that includes all stakeholders (#2)



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Final Session

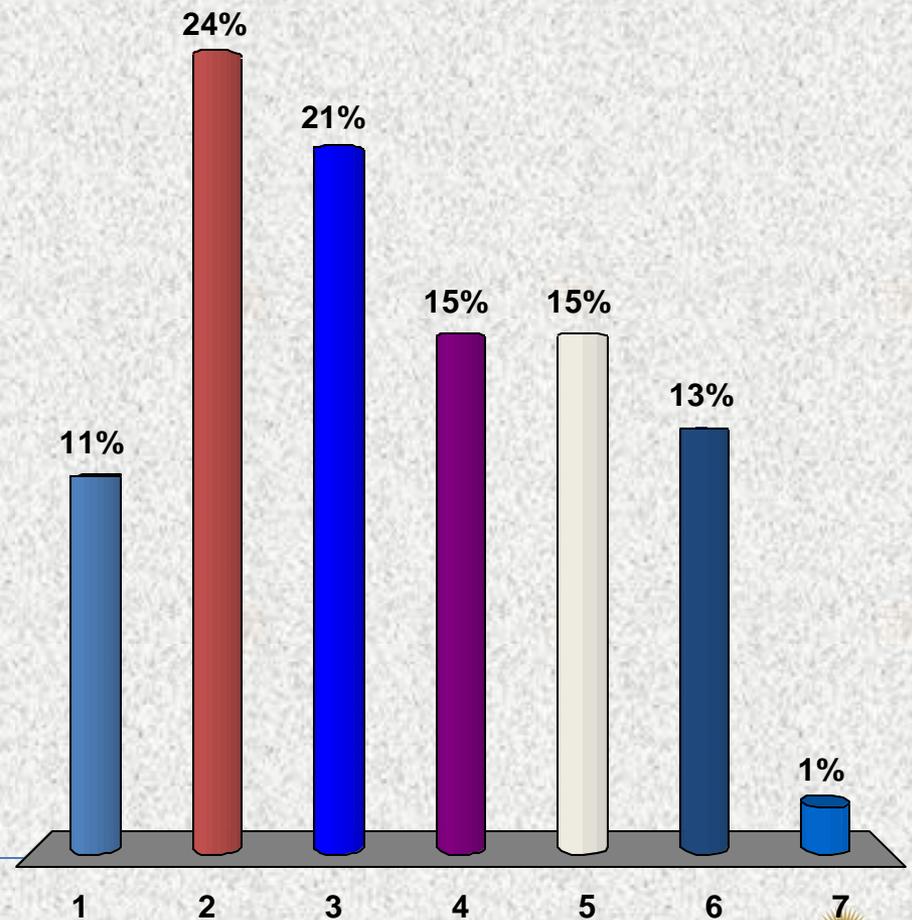
- **What is a headline we want to send to the outside world about this conference?**
- **What are you committed to do as an individual or in partnership with others here to help deal with the issues and move toward the vision?**

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to Antimicrobial
Use & Resistance:
A Dialogue for
a Common Purpose**



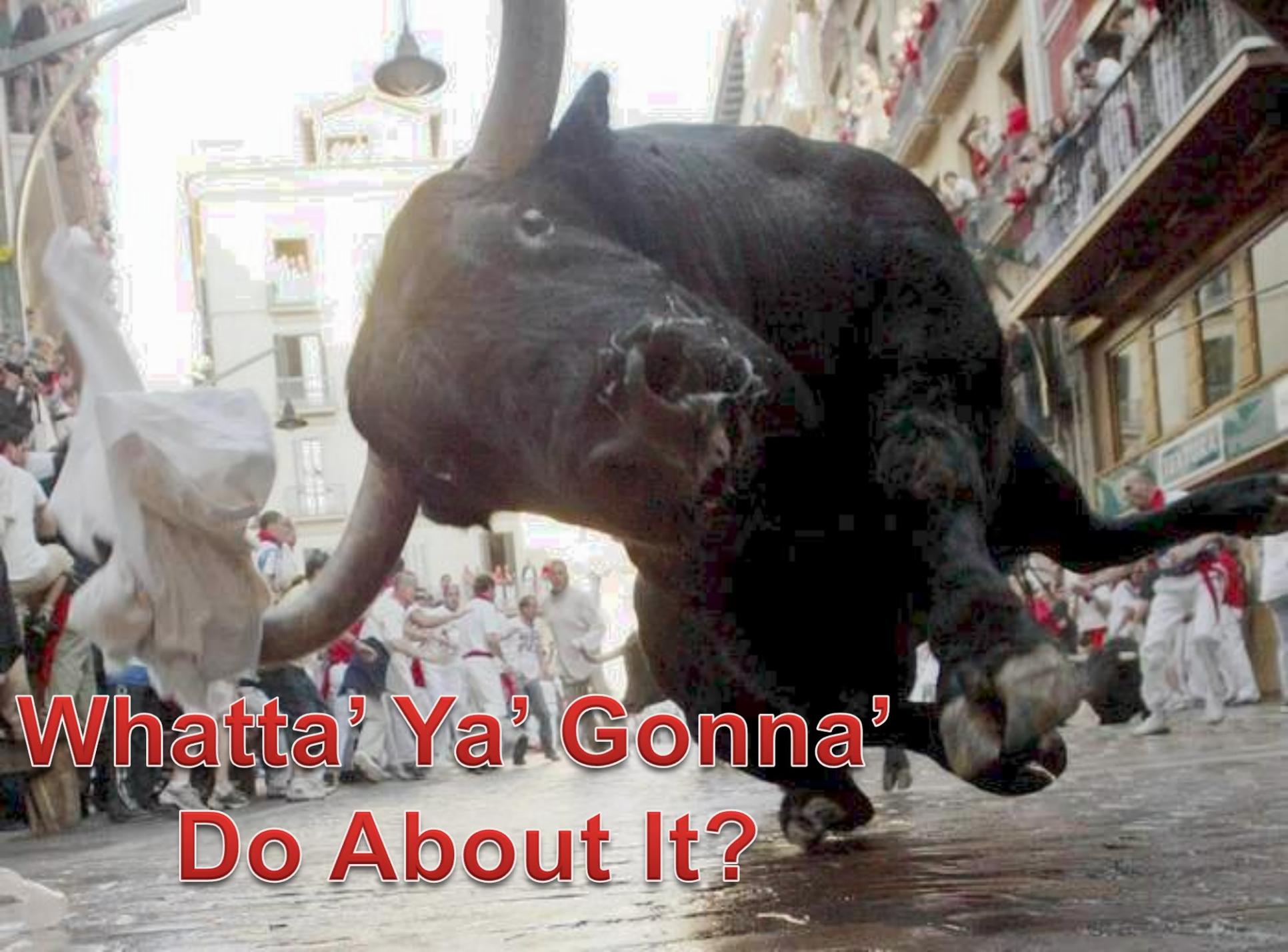
Headlines (choose one)

1. Animal agriculture, in partnership with other organizations, advances plan to keep antibiotics working
2. Animal agriculture promotes a One Health approach to antimicrobial resistance (#1)
3. Animal agriculture calls for One Health summit to address the problem of antimicrobial resistance (#2)
4. Challenge issued to join in dialogue on the problem of antimicrobial resistance
5. Antimicrobial resistance: global importance, local action
6. Antimicrobial resistance is a global problem requiring global solutions
7. NIAA committed to making a difference



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Use & Resistance:
A Dialogue for
a Common Purpose





**Whatta' Ya' Gonna'
Do About It?**

Individual Commitments

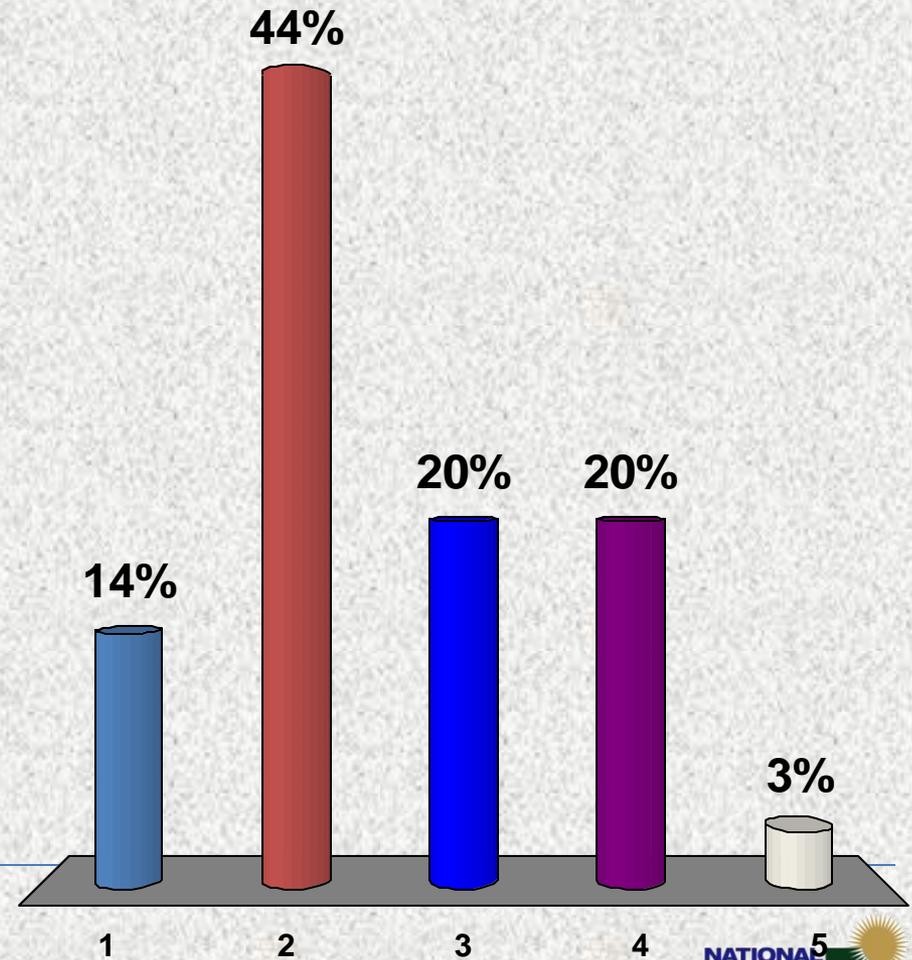
- Engage MD's and hospital staff that meet on a routine basis across the street from my office
- Work with college/university from both the public health and animal health side to begin discussing the issue and formulating a strategic plan for the college/university.
- Get more engaged in the social and traditional media via comments or letters to the editor correcting misinformation.
- Working with my clientele to better understand antimicrobial resistance and methods to minimize impacts
- Talk with friends and neighbors about the issue in terms they can understand

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to Antimicrobial
Use & Resistance:
A Dialogue for
a Common Purpose



My attitudes about antimicrobial resistance have changed as a result of this conference.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree

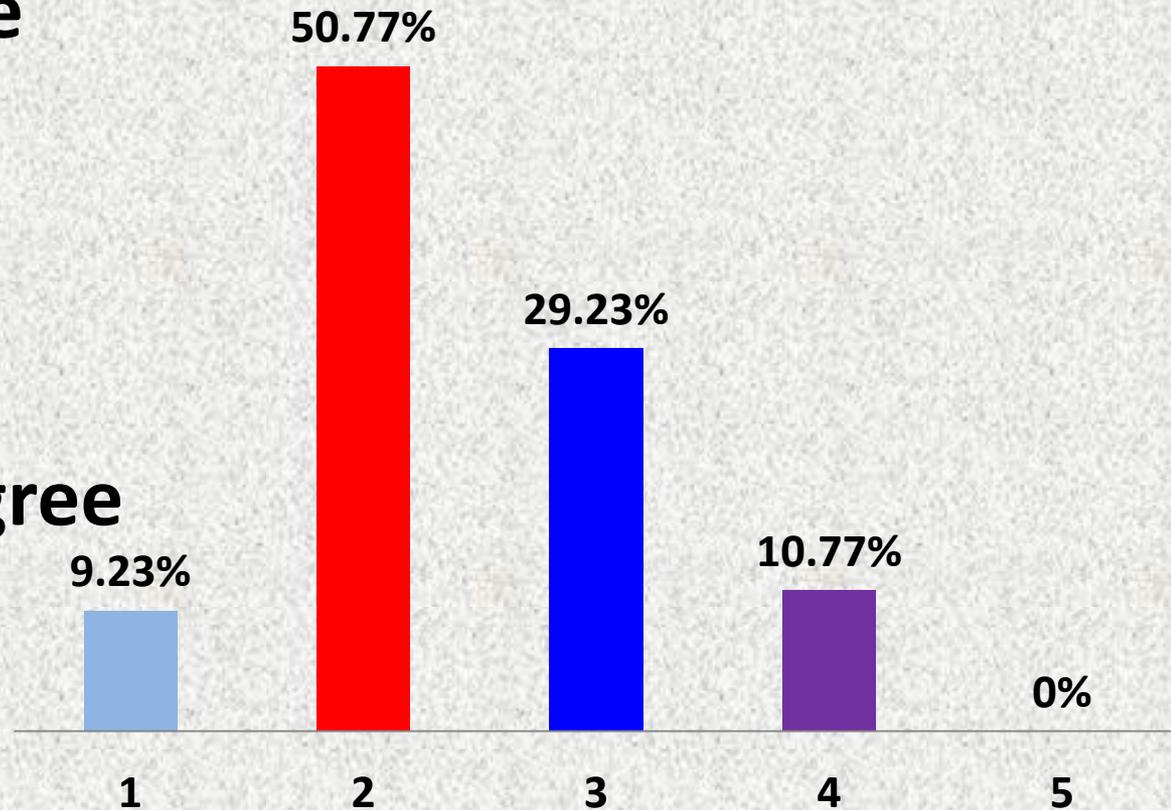


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Use & Resistance:
*A Dialogue for
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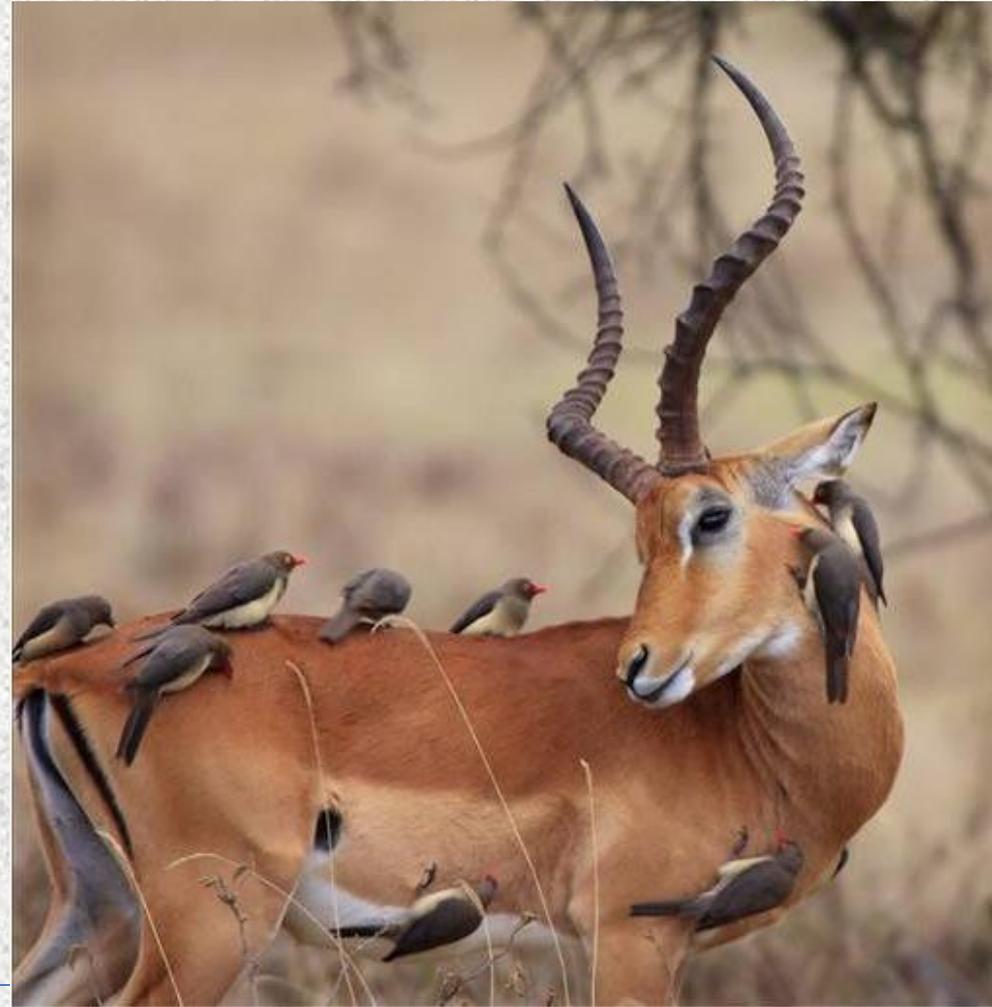
This conference will have a positive impact.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree



Never doubt that a small group of thoughtful, committed people can change the world; indeed it is the only thing that ever has

- Margaret Mead



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Use & Resistance:
A Dialogue for
a Common Purpose**



In this time of enormous
change and challenge, comes
enormous opportunity.

-E. Gordon Gee

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Use & Resistance:
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a Common Purpose*





The END
Any questions?

www.animalagriculture.org